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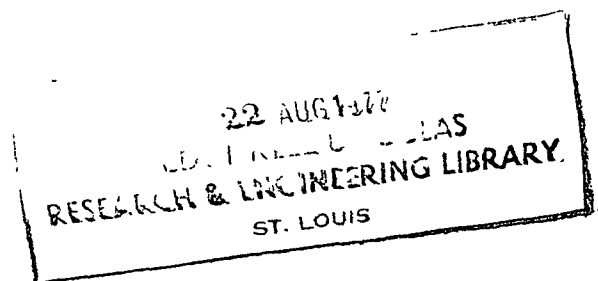
Publications of the Planetary Biology Program
for 1976--A Special Bibliography

Compiled by
F. D. Bradley and R. S. Young

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INTRODUCTION

The Planetary Biology Program, within the Office of Space Science of the National Aeronautics and Space Administration, is the first and only integrated program to methodically investigate the planetary events which may have been responsible for, or related to, the origin, evolution, and distribution of life in the universe. Research supported by this program is divided into the seven areas listed below together with a statement of the principal objective of each research area.

Chemical Evolution - To understand how biologically significant organic molecules are synthesized under conditions presumed to have existed on the primitive earth before the advent of life or which may presently exist on other planets.

Organic Geochemistry - To analyze terrestrial and extra-terrestrial material for organic molecules, biological structures, and other clues to the origin(s) of life on this and other planets.

Life Detection - To develop and implement techniques to search for, detect, and characterize life and life-related molecules on this and other planets.

Biological Adaptation - To understand the adaptive mechanisms used by terrestrial organisms to survive and/or grow in environmental extremes approaching those on other planets.

Bioinstrumentation - To design, develop, and test prototype spaceflight instruments which will be used to detect and characterize life and life-related molecules on the surface and in the atmosphere of other planets.

Planetary Environments - To develop analytical techniques which measure environmental parameters on other planets which are relevant to the search for life.

Origin of Life - To identify the sequence of events leading from the putative complex organic milieu in the primordial terrestrial oceans to the origin of the first living systems.

The arrangement of references in this bibliography follows the division of research described. Articles are listed alphabetically by author under the research area with which

they are most closely related. Only those publications which resulted from research supported by the Planetary Biology Program and which bear a 1976 publication date have been included. Abstracts, theses, and presentations are not included because of the preliminary and abbreviated nature of the former and the frequent difficulty of obtaining the latter.

Our intent in compiling this bibliography is twofold. First, we would like to provide the scientific community with an annual listing, beginning with 1975, of current publications resulting from research pursued under the auspices of NASA's Planetary Biology Program. Secondly, we hope to stimulate the exchange of information and ideas among scientists working in the different areas of the program. To facilitate the exchange process, we have identified, by asterisk, the author of each publication who is presently participating in the program. Current addresses for all principal investigators are given in the appendix.

We wish to thank all the participants of the Planetary Biology Program for their cooperative response to our request for an enumeration of their 1976 publications.

Chemical Evolution

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¹Jukes, T.H. Principal Investigator

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¹Jukes, T.H., Principal Investigator

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¹Eirich, F.R., Principal Investigator

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APPENDIX: PRINCIPAL INVESTIGATORS

Professor Elso S. Barghoorn
The Biological Laboratories
Harvard University
16 Divinity Avenue
Cambridge, MA 02138

Professor Ralph S. Becker
Department of Chemistry
University of Houston
Houston, TX 77004

Professor Klaus Biemann
Department of Chemistry
Massachusetts Institute of Technology
Cambridge, MA 02139

Professor William A. Bonner
Department of Chemistry
Stanford University
Stanford, CA 94305

Asst. Professor Charles W. Boylen
Department of Biology
Rensselaer Polytechnic Institute
Troy, NY 12181

Assoc. Professor Joseph Bragin
Department of Chemistry
California State University
5151 State University Drive
Los Angeles, CA 90032

Dr. A. L. Burlingame
Biomedical and Environmental Mass
Spectrometry Resource
Space Sciences Laboratory
University of California
Berkeley, CA 94720

Professor Melvin Calvin
Department of Chemistry
University of California
Berkeley, CA 94720

Mr. Glenn C. Carle
Ames Research Center
Code LPD
Moffett Field, CA 94035

Professor L. E. Casida, Jr.
Department of Microbiology and
Cell Biology
The Pennsylvania State University
University Park, PA 16802

Dr. Sherwood Chang
Ames Research Center
Code LPE
Moffett Field, CA 94035

Assoc. Professor John R. Cronin
Department of Chemistry
Arizona State University
Tempe, AZ 85281

Professor James F. Danielli
Department of Life Sciences
Worcester Polytechnic Institute
Worcester, MA 01609

Dr. Margaret O. Dayhoff
National Biomedical Research Foundation
Georgetown University Medical Center
3900 Reservoir Road, N.W.
Washington, DC 20007

Mr. Paul H. Deal
Ames Research Center
Code LPB
Moffett Field, CA 94035

Dr. Donald L. DeVincenzi
Ames Research Center
Code LP
Moffett Field, CA 94035

Dr. Frederick R. Eirich
Department of Chemistry
Polytechnic Institute of New York
333 J Street
Brooklyn, NY 11201

Dr. Janos H. Fendler
Department of Chemistry
College of Science
Texas A&M University
College Station, TX 77843

Professor James E. Ferris
Department of Chemistry
School of Science
Rensselaer Polytechnic Institute
Troy, NY 12181

Professor Clair E. Folsome
Laboratory for Exobiology
Department of Microbiology
University of Hawaii at Manoa
2538 The Mall
Honolulu, HI 96822

Dr. Sidney W. Fox, Director
Institute for Molecular and Cellular
Evolution
University of Miami, 521 Anastasia
Coral Gables, FL 33134

Mr. Herbert S. Ginoza
Ames Research Center
Code LPD
Moffett Field, CA 94035

Professor Milton P. Gordon
Department of Biochemistry
1405 Health Sciences Building
University of Washington
Seattle, WA 98195

Mr. Milton R. Henrich
Ames Research Center
Code LPB
Moffett Field, CA 94035

Assoc. Professor John M. Hayes
Department of Chemistry
Chemistry Building
Indiana University
Bloomington, IN 47401

Mr. Lawrence I. Hochstein
Ames Research Center
Code LPB
Moffett Field, CA 94035

Professor Norman H. Horowitz
Department of Biology
California Institute of Technology
Pasadena, CA 91109

Assoc. Professor Jerry Hubbard
School of Biology
Georgia Institute of Technology
Atlanta, GA 30332

Dr. Richard D. Johnson
Ames Research Center
Code LB
Moffett Field, CA 94035

Professor Thomas H. Jukes
Space Sciences Laboratory
University of California
Berkeley, CA 94720

Professor Isaac R. Kaplan
Department of Earth and Space Sciences
3806 Geology Building
University of California
Los Angeles, CA 90024

Professor Dean H. Kenyon
Department of Biology
San Francisco State University
San Francisco, CA 94132

Dr. Harold P. Klein
Ames Research Center
Code L
Moffett Field, CA 94035

Dr. Bessel Kok
Martin Marietta Laboratories
Martin Marietta Corporation
1450 South Rolling Road
Baltimore, MD 21227

Assoc. Professor William R. Kuhn
Department of Atmospheric and Oceanic
Sciences
University of Michigan
Ann Arbor, MI 48109

Dr. James C. Lacey, Jr.
Assoc. Professor of Biochemistry
Laboratory of Molecular Biology
University of Alabama in Birmingham
The Medical Center
University Station
Birmingham, AL 35294

Mr. Janos K. Lanyi
Ames Research Center
Code LPB
Moffett Field, CA 94035

Mr. James G. Lawless
Ames Research Center
Code LPE
Moffett Field, CA 94035

Professor Joshua Lederberg
Department of Genetics
Stanford University School of
Medicine
Stanford, CA 94305

Dr. Gilbert V. Levin
Biospherics Incorporated
4928 Wyaconda Road
Rockville, MD 20852

Dr. Elliott C. Levinthal
Department of Genetics
Stanford University School of Medicine
Stanford, CA 94305

Assoc. Professor Russell E. MacDonald
Section of Biochemistry, Molecular
and Cell Biology
Division of Biological Sciences
College of Agriculture and Life Sciences
Cornell University
Ithaca, NY 14853

Dr. Robert D. MacElroy
Ames Research Center
Code LPB
Moffett Field, CA 94035

Assoc. Professor Lynn Margulis
Department of Biology
Boston University
2 Cummington Street
Boston, MA 02215

Mr. Edward L. Merek
Ames Research Center
Code LPD
Moffett Field, CA 94035

Professor Stanley L. Miller
Department of Chemistry, B-017
University of California, San Diego
La Jolla, CA 92093

Professor Harold J. Morowitz
Department of Molecular Biosphysics
and Biochemistry
Yale University
Box 1937, Yale Station
New Haven, CT 06520

Professor Bartholomew Nagy
Department of Geosciences
Laboratory of Organic Geochemistry
University of Arizona
Tucson, AZ 85721

Dr. Joseph Nagyvary
Department of Biochemistry and Biophysics
Texas A&M University
College Station, TX 77843

Dr. Leslie E. Orgel
The Salk Institute
P.O. Box 1809
San Diego, CA 92112

Professor John Oro'
Laboratory of Biomolecular Analysis
Department of Biophysical Sciences
University of Houston
Houston, TX 77004

Professor Tobias C. Owen
Department of Earth and Space Sciences
State University of New York
Stony Brook, NY 11794

Mr. Vance I. Oyama
Ames Research Center
Code LPD
Moffett Field, CA 94035

Professor Patrick L. Parker
Marine Science Institute
Port Aransas Marine Laboratory
University of Texas
Port Aransas, TX 78373

Mr. Glenn E. Pollock
Ames Research Center
Code LPE
Moffett Field, CA 94035

Professor Cyril Ponnampерuma
Laboratory of Chemical Evolution
Department of Chemistry
University of Maryland
College Park, MD 20742

Dr. Alexander Rich
Department of Biology
Massachusetts Institute of Technology
Cambridge, MA 02139

Professor Duane L. Rohlfing
Department of Biology
University of South Carolina
Columbia, SC 29208

Professor Carl E. Sagan
Laboratory for Planetary Studies
Center for Radiophysics and Space
Research
Cornell University
Ithaca, NY 14853

Professor J. William Schopf
Department of Geology
University of California
Los Angeles, CA 90024

Mr. Melvin P. Silverman
Ames Research Laboratory
Code LPD
Moffett Field, CA 94035

Professor Grant Gill Smith
Department of Chemistry
College of Science
Utah State University
Logan, UT 84321

Professor Walther Stoeckenius, M.D.
Cardiovascular Research Institute
School of Medicine
University of California
San Francisco, CA 94143

Assoc. Professor Frederick C. Wedler
Department of Chemistry
Rensselaer Polytechnic Institute
Troy, NY 12181

Mr. Fritz H. Woeller
Ames Research Center
Code LPD
Moffett Field, CA 94035

Professor Carl R. Woese
Department of Genetics and Development
College of Liberal Arts and Sciences
University of Illinois
Urbana, IL 61801

Dr. A.A. Yayanos
Physiological Research Laboratory
Scripps Institute of Oceanography
University of California, San Diego
La Jolla, CA 92093

Assoc. Professor John H. Yopp
Department of Botany
Southern Illinois University
Carbondale, IL 62901

Dr. Richard S. Young
Code SBL
National Aeronautics and Space
Administration
Washington, DC 20546